

TEXAS DEPARTMENT OF INSURANCE

Engineering Services Program / MC 103-3A 333 Guadalupe Street P.O. Box 149104 Austin, Texas 78714-9104
Phone No. (512) 322-2212 Fax No. (512) 463-6693

PRODUCT EVALUATION

Effective December 1, 2011

WIN-1483

*The following product has been evaluated for compliance with the wind loads specified in the **International Residential Code (IRC)** and the **International Building Code (IBC)**. This product shall be subject to reevaluation **August 2012**.*

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

Ultra Aluminum Clad Wood Operating/Fixed Casement Windows, Mulled, Non-Impact Resistant,
manufactured by

Kolbe & Kolbe Millwork Co., Inc.
1323 South Eleventh Avenue
Wausau, WI 54401
(715) 842 - 5666

will be acceptable in designated catastrophe areas along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions and this product evaluation.

PRODUCT DESCRIPTION

The aluminum clad wood casement windows evaluated in this report are mulled operating/fixed casement windows. The aluminum clad wood casement windows are non-impact resistant. This product evaluation report is for aluminum clad wood casement windows based on the following tested constructions:

General Description:

System	Description	Label Rating	Hallmark Certification
1	Ultra Operating Casement; Mulled; High Performance	R-PG70 72x72-C C-R70 72x72	413-H-1106.00 413-H-1106.01
2	Ultra Operating Casement; Mulled; 4" Vertical Spread; Standard Performance	CW-PG70 76x66-C C-C70 76 x 66	413-H-1010.00 413-H-1010.01
3	Ultra Operating/Fixed Casement; Mulled; High Performance	LC-PG70 108x72-C C-C70 108 x 72	413-H-1103.00 413-H-1103.01
4	Ultra Operating/Fixed Casement; Mulled; High Performance	R-PG60 144x72-C C-R60 144 x 72	413-H-1112.00 413-H-1112.01

Product Dimensions:

System	Overall Size	Sash Size(s)	Glass Size(s)
1	72" x 72"	Two: 34 $\frac{1}{8}$ " x 70 $\frac{1}{8}$ "	Two: 30 $\frac{5}{8}$ " x 66 $\frac{5}{8}$ "
2	76" x 66"	Two: 34 $\frac{1}{8}$ " x 66 $\frac{1}{8}$ "	Two: 30 $\frac{5}{8}$ " x 60 $\frac{5}{8}$ "
3	108" x 72"	Two: 34 $\frac{1}{8}$ " x 70 $\frac{1}{8}$ " One: 70 $\frac{1}{8}$ " x 70 $\frac{1}{8}$ "	Two: 30 $\frac{5}{8}$ " x 66 $\frac{5}{8}$ " One: 66 $\frac{5}{8}$ " x 66 $\frac{5}{8}$ "
4	144" x 72"	Four: 34 $\frac{1}{8}$ " x 70 $\frac{1}{8}$ "	Four: 30 $\frac{5}{8}$ " x 66 $\frac{5}{8}$ "

Glazing Description:

System	Glass Construction ¹	Glazing Method ²
1	IG-1	GM-1
2	IG-2	GM-2
3	Operating Sash: IG-1 Fixed Sash: IG-3	Operating Sash: GM-1 Fixed Sash: GM-2
4	IG-1	GM-1

Note: ¹ See the "Glass Construction Key" for the glass construction.

² See the "Glazing Method Key" for the glazing method description.

Glass Construction Key:

IG-1: Sealed insulating glass unit. The sealed insulating glass unit is comprised of two $\frac{3}{16}$ " annealed glass lites that are separated by a stainless steel spacer system. The glass thickness and type used in the insulating glass units of the tested assembly and in smaller assemblies shall comply with ASTM E 1300-04.

IG-2: Sealed insulating glass unit. The sealed insulating glass unit is comprised of two double strength ($\frac{1}{8}$ ") annealed glass lites that are separated by a stainless steel spacer system. The glass thickness and type used in the insulating glass units of the tested assembly and in smaller assemblies shall comply with ASTM E 1300-04.

IG-3: Sealed insulating glass unit. The sealed insulating glass unit is comprised of two $\frac{5}{32}$ " heat strengthened glass lites that are separated by a stainless steel spacer system. The glass thickness and type used in the insulating glass units of the tested assembly and in smaller assemblies shall comply with ASTM E 1300-04.

Glazing Method Key:

GM-1: The insulating glass unit is set from the interior against k-glaze tape and silicone sealant backbedding. Wood glazing stops are utilized along the interior and are secured with brads.

GM-2: The insulating glass unit is set from the interior against silicone sealant backbedding. Wood glazing stops are utilized along the interior and are secured with brads.

Frame Construction: The frame members consist of molded pine. The frame corners are rabbeted, butted, sealed with silicone, and secured with fasteners. Interior wood stops are secured at the head and side jambs with fasteners.

Aluminum Cladding: Extruded aluminum is applied to the frame head, sill and side jambs. The extruded aluminum corners are mitered and joined with a corner key and secured with fasteners.

Sash Construction: The sash members consist of molded pine sections. The sash corners are mortise and tenon construction. Fixed sashes are secured to the frame with steel retainer clips.

Aluminum Cladding: The extruded aluminum corners are secured to the wood sash members with fasteners.

Mullion:

System 1: The integral mullion post is sealed and secured to the head and the sill with fasteners.

System 2: The combination mullion consists of two windows fastened alongside a 4" ladder spread mull. The window side jambs are secured to the mull with fasteners.

System 3: The mullion consists of two window side jambs secured with fasteners.

System 4: The integral mullion post is sealed and secured to the head and the sill with fasteners. The combination mullion consists of two side jambs secured together with fasteners.

Hardware (per operating window):

- Truth single actuated three-point lock with metal keeper; Two (2) required; Located on the side jamb.
- Truth adjustable 14" hinges; Two (2) required; Located at the head and the sill.
- Concealed two-piece metal snubbers; Three (3) required; Located on the sash and side jamb.
- Truth 106 Encore dual arm operator; One (1) required; Located on the frame sill.

Product Identification (All systems): A certification program label (WDMA Hallmark Certified) will be affixed to the window. The certification program label includes the manufacturer's name; product name; performance characteristics; the approved inspection agency (WDMA); and the following applicable standards: AAMA/WDMA/CSA 101/I.S.2/A440-05 and AAMA/WDMA/CSA 101/I.S.2/A440-08.

LIMITATIONS

Design pressures (DP):

System	Overall Width (in.)	Overall Height (in.)	Design Pressure (psf)
1	72	72	± 70
2	76	66	± 70
3	108	72	± 70
4	144	72	± 60

Impact Resistance: This window assembly does not satisfy the Texas Department of Insurance's criteria for protection from windborne debris. This window assembly will need to be protected with an impact protective system when installed in areas where windborne debris protection is required.

Acceptance of Smaller Assemblies: Window assemblies with dimensions equal to or smaller than those specified above are acceptable within the limitations specified in this report.

INSTALLATION INSTRUCTIONS

General: The window assembly shall be prepared and installed in accordance with the manufacturers recommended installation instructions. Detailed installation instructions and drawings are available from the manufacturer.

Installation:

Option 1: The window assembly shall be fastened to minimum Southern Yellow Pine lumber. The window assembly is secured to the wall framing using Kolbe & Kolbe metal installation clips. The installation clips ($1 \frac{5}{8}$ " x $10 \frac{1}{16}$ " x 0.04") are secured to the window frame side jambs, head, and sill. The clips are secured to the window frame with two (2) No. 8 x $\frac{3}{4}$ " screws. The clips are secured to the wall framing with one (1) No. 8 x $1 \frac{3}{4}$ " screw. The fasteners shall be long enough to penetrate a minimum of $1 \frac{1}{2}$ " into the wall framing. The spacing of the clips is specified in the table below.

Installation Clip Spacing:

System	Head and Sill (distance from each end)	Head and Sill (on center spacing)	Side Jambs (distance from each end)	Side Jambs (on center spacing)
1	18"	None	$14 \frac{7}{16}$ "	$14 \frac{7}{16}$ "
2	$15 \frac{3}{8}$ "	$15 \frac{3}{8}$ "	22"	22"
3	Operating: 18" Fixed: 12"	Operating: None Fixed: 12"	Operating: $14 \frac{7}{16}$ " Fixed: 12"	Operating: $14 \frac{7}{16}$ " Fixed: 12"
4	18"	None	$14 \frac{7}{16}$ "	$14 \frac{7}{16}$ "

Option 2: The window assembly shall be fastened to minimum Southern Yellow Pine lumber. The window assembly is secured to the wall framing using the window frame with minimum No. 10 screws. The fasteners shall be long enough to penetrate a minimum of $1 \frac{1}{2}$ " into the wall framing. The spacing of the fasteners is specified in the table below.

Fastener Spacing:

System	Head and Sill (distance from each end)	Head and Sill (on center spacing)	Side Jambs (distance from each end)	Side Jambs (on center spacing)
1	12"	12"	$10 \frac{1}{4}$ "	$10 \frac{1}{4}$ "
2	N/A	N/A	N/A	N/A
3	Operating: 12" Fixed: 9"	Operating: 12" Fixed: 9"	Operating: $10 \frac{1}{4}$ " Fixed: 9"	Operating: $10 \frac{1}{4}$ " Fixed: 9"
4	12"	12"	12"	12"

Mullions: The mullion is anchored on each end with Gemini installation clips which are secured with two (2) No. 8 x $2 \frac{1}{4}$ " screws per clip. Each clip is attached to the wall framing with two (2) No. 8 screws. The fasteners shall be long enough to penetrate a minimum of $1 \frac{1}{2}$ " into the wall framing.

Nailing Flange (both options): The perimeter of the window is secured with minimum 12 gauge smooth shank roofing nails spaced 7 inches on center penetrating through the nailing flange. The fasteners shall be long enough to penetrate a minimum of $1\frac{1}{2}$ " into the wall framing

Note: The manufacturer's installation instructions shall be available on the job site during installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC), the International Building Code (IBC), and the Texas Revisions.